

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.

These are the fees effective October 1, 1997.

Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB-09-12 See 37 C.F.R. §§ 1.27 and 1.28.

TOTAL AMOUNT OF PAYMENT (\$) 790.00**Complete if Known**

Application Number	
Filing Date	
First Named Inventor	Gary S. Bachand
Examiner Name	
Group / Art Unit	
Attorney Docket No.	5137

METHOD OF PAYMENT (check one)

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number
Deposit Account Name

07-0900

General Mills, Inc.

☐ Charge Any Additional Fee Required Under 37 C.F.R. §§ 1.16 and 1.17☐ Charge the Issue Fee Set in 37 C.F.R. § 1.18 at the Mailing of the Notice of Allowance

- 2.
- ☐
- Payment Enclosed:

☐ Check ☐ Money Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 790	201 395	Utility filing fee	790
105 330	205 165	Design filing fee	
107 540	207 270	Plant filing fee	
108 790	208 395	Reissue filing fee	
114 150	214 75	Provisional filing fee	
SUBTOTAL (1)			(\$) 790.00

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20**	X	
Multiple Dependent	-3**	X	

**or number previously paid, if greater; For Reissues, see below

Large Entity Small Entity

Fee Code (\$)	Fee Code (\$)	Fee Description
103 22	203 11	Claims in excess of 20
102 82	202 41	Independent claims in excess of 3
104 270	204 135	Multiple dependent claim, if not paid
109 82	209 41	** Reissue independent claims over original patent
110 22	210 11	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 400	216 200	Extension for reply within second month	
117 950	217 475	Extension for reply within third month	
118 1,510	218 755	Extension for reply within fourth month	
128 2,060	228 1,030	Extension for reply within fifth month	
119 310	219 155	Notice of Appeal	
120 310	220 155	Filing a brief in support of an appeal	
121 270	221 135	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,320	241 660	Petition to revive - unintentional	
142 1,320	242 660	Utility issue fee (or reissue)	
143 450	243 225	Design issue fee	
144 670	244 335	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Sheet	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 790	246 395	Filing a submission after final rejection (37 CFR 1.129(e))	
149 790	249 395	For each additional invention to be examined (37 CFR 1.129(b))	
Other fee (specify) _____			
Other fee (specify) _____			
SUBTOTAL (3)			(\$)

* Reduced by Basic Filing Fee Paid

SUBMITTED BY

Typed or Printed Name John A. O'Toole

Signature John A. O'Toole

Date 9/4/98

Complete (if applicable)

Reg. Number 28,336

Deposit Account User ID

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Order No.: 402

Alloc. No.: 125-120

1 Labelless, Rolled Food Item And Its Fabrication

BACKGROUND

The present invention generally relates to food items, particularly to rolled food items, more particularly to coils of food supported on support material, and specifically to rolled food items or the like at least temporarily retained in a coiled condition without the use of a label during its fabrication.

The sale of snack-type food products is a highly competitive business. In addition to the particular food components, increasingly the novelty and play value of the product are important in the marketability of any particular food item. For example, fruit-based snack products such as FRUIT ROLL-UPS™ fruit products have found wide market acceptance. Likewise, U.S. Patent No. 4,882,175 recognized the enhanced marketability of chewing gum in the form of a rolled-up tape allowing the consumer the chance to break off the desired size of piece to chew, saving the rest for later.

Many foods such as dehydrated fruit puree do not lend themselves to forming rolled food items such as where the food is in a strip of a thinness generally requiring external support and/or where the food tends to stick to itself such that it creates a single mass which can not be unrolled. In such cases, support material and food supported thereon are rolled into a coil creating a novelty form of merchandising for that food. For example, FRUIT BY THE FOOT™ fruit products of the type disclosed in U.S. Patent Nos. 5,455,053 and 5,723,163 have enhanced play value which is believed to promote the marketability thereof.

During the fabrication of rolled food items, provisions have to be made to prevent the food item from unrolling during fabrication such as in the wrapping and other packaging operations. A prior preferred method to prevent undesired unrolling is the application of a label extending over the trailing edge of the support material.

1 In addition to its functional aspects, the labels used to
hold the rolled food items in a coiled condition can add
to the novelty and play value of the rolled food item.
Particularly, the label often includes graphics which are
5 visually appealing to the typical consumer of the food of
the rolled food item and/or which promote the future
purchase of the rolled food item. However, problems arose
from the labels which had not been appropriately discarded
after their removal from the rolled food item being
10 difficult to remove when adhered to surfaces such as desk
tops. One solution to this problem was to provide novel
labels for such rolled food items such as of the type
disclosed in U.S. Patent Appln. No. 08/888,803 filed July
7, 1997, which is hereby incorporated herein by reference.

15 Another prior method to prevent unintentional
unrolling is to utilize an edible adhesive such as corn
syrup. However, corn syrup and similar adhesives have
certain negatives including being an additive to the food
which could affect its taste, texture, and/or appearance,
20 being messy while eating and also during application and
fabrication and being generally difficult to work with.

Accordingly, it is an object of the present invention
to provide novel apparatus and methods for fabrication of
a novel rolled food item which, in the preferred form, is
25 retained at least temporarily in a coiled condition during
fabrication such as in the wrapping and other packaging
operations without the use of a label and which overcomes
the negatives associated with the use of corn syrup and
similar food adhesives.

30 Another object of the present invention is to allow
the retention of the rolled food item in a coiled
condition without the use of a label and without
significant change to existing fabrication equipment and
its operating conditions.

35 SUMMARY

Surprisingly, the above objectives and other problems
can be satisfied in the field of rolled food items and

00150652 091008

1 their fabrication by providing, in the preferred form, a
first portion of the food adjacent the trailing edge
having a moisture content greater than the remaining
portions of the food and sufficient to increase the
5 tackiness of the food to be adherable to the support
material to retain the support material and food in a roll
and to at least temporarily prevent unintentional
unrolling of the roll during fabrication of the rolled
food item.

10 In the preferred form, the first portion of the food
is formed by spraying a source of moisture, and in the
most preferred form a food grade water free of adhesive
type additives, onto the food adjacent to the trailing
edge prior to its rolling into the roll.

15 The present invention will become clearer in light of
the following detailed description of an illustrative
embodiment of this invention described in connection with
the drawings.

DESCRIPTION OF THE DRAWINGS

20 The illustrative embodiment may best be described by
reference to the accompanying drawings where:

Figure 1 shows a top plan view of a strip of support
material and food according to the preferred teachings of
the present invention, with portions broken away.

25 Figure 2 shows a side elevational view of the strip of
support material and food of Figure 1 rolled into a roll
to form a rolled food item.

Figures 3a and 3b show diagrammatic side elevational
views of the apparatus for rolling the strip of support
30 material and food of Figure 1 to form the rolled food item
of Figure 2.

All figures are drawn for ease of explanation of the
basic teachings of the present invention only; the
extensions of the figures with respect to number,
35 position, relationship, and dimensions of the parts to

04450692-091009

1 form the preferred embodiment will be explained or will
be within the skill of the art after the following
description has been read and understood. Further, the
exact dimensions and dimensional proportions to conform
5 to specific force, weight, strength, and similar
requirements will likewise be within the skill of the
art after the following description has been read and
understood.

Where used in the various figures of the drawings,
10 the same numerals designate the same or similar parts.
Furthermore, when the terms "first", "second", "edge",
"end", "transverse", "longitudinal", "width", "length",
"height", "inner", "outer", "leading", "trailing", and
similar terms are used herein, it should be understood
15 that these terms have reference only to the structure
shown in the drawings as it would appear to a person
viewing the drawings and are utilized only to facilitate
describing the illustrative embodiment.

DESCRIPTION

20 A rolled food item according to the preferred
teachings of the present invention is shown in the
drawings and generally designated 110. In the most
preferred embodiment of the present invention, rolled
food item 110 is an improvement of the type shown and
25 described in U.S. Patent Nos. 5,205,106; 5,284,667;
5,455,053 and 5,723,163. For purpose of explanation of
the basic teachings of the present invention, the same
numerals designate the same or similar parts in the
present figures and the figures of U.S. Patent Nos.
30 5,205,106; 5,284,667; 5,455,053 and 5,723,163. The
description of the common numerals and rolled food item
110 may be found herein and in U.S. Patent Nos. 5,205,106;
5,284,667; 5,455,053 and 5,723,163, which are hereby
incorporated herein by reference.

35 Generally, rolled food item 110 includes strips of

1 food 14 and support material 16 simultaneously rolled
about its leading edge or end 136 into a coil. Food 14 is
of a thinness requiring external support by support
material 16. In the most preferred form, food 14 is a
5 sweetened dehydrated fruit-based material typically
referred to in the art as a fruit leather which can be
derived from fruit purees and in the most preferred form
is of the same type as utilized in the first, solid or
"hard" portion or region of the dual textured food piece
10 described in U.S. Patent No. 4,847,098 issued July 11,
1989 to J.E. Langler and in U.S. Patent No. 4,853,236
issued August 1, 1989 to J.E. Langler, each entitled Dual
Textured Food Piece of Enhanced Stability and each of
which is hereby incorporated herein by reference.

15 Support material 16 may be formed of any suitable
material such as silicon parchment paper which has the
necessary strength to support food 14 without tearing and
without bulkiness to allow rolling of food 14 and support
material 16 into a compact food piece and which allows
20 food 14 to be easily separated therefrom for consumption.

In the preferred form, the strip of food 14 has side
edges spaced inwardly from the side edges of the strip of
support material 16 and in the most preferred form are
spaced in the order of one sixteenth inch (1.6 mm)
25 inwardly from the side edges of the strip of support
material 16. Depending upon the method of fabrication,
spacing the strip of food 14 inward of the side edges of
the strip of support material 16 is advantageous as food
14 has less tendency to rub against the fabrication
30 equipment which is undesirable as the side edges of the
strip of food 14 could acquire an unsightly or otherwise
undesirable appearance and as food 14 could build up or
otherwise collect on the fabrication equipment requiring
extra cleaning and maintenance. In the preferred form,
35 the strip of food 14 does not extend beyond the leading
end 136 and trailing edges or ends 138 of the strip of

09150602 091098

1 support material 16 and in the most preferred form has a
length equal to the length of the strip of support
material 16 so that leading and trailing ends 136 and 138
of the strip of food 14 are coextensive with leading and
5 trailing ends 136 and 138 of the strip of support material
16. Specifically, in the most preferred form, the strips
of food 14 and support material 16 are formed continuously
and are simultaneously cut to length such as by a water
knife. In the preferred form, the width of the strip of
10 support material 16 is minimal relative to its length and
in the most preferred form, the strip of support material
16 has a width in the order of one and one-eighth inch
(2.9 cm) and a length in the order of 36 inches (1 meter).

The strips of food 14 and support material 16 are
15 rolled around their leading edges or ends 136 into the
coil having multiple rotations with the strip of support
material 16 located on the outside of the roll or coil and
with trailing edge 138 of the strips of food 14 and
support material 16 located on the outside or periphery of
20 the roll or coil. In the most preferred form, when the
strips of food 14 and support material 16 are rolled, the
periphery of the coil or roll is in the order of four and
five-eighths inches (11.7 cm).

In the production of rolled food item 110, generally
25 one or more strips of food 14 and support material 16 are
transported in a generally planar condition such as on a
conveyor 140 towards a roll-up section 76. It can be
appreciated that strips of food 14 and support material 16
can be formed in a variety of manners according to the
30 teachings of the present invention including but not
limited to the type disclosed in U.S. Patent Nos.
5,205,106; 5,284,667; 5,455,053 and 5,723,163. Similarly,
roll-up section 76 can be of a variety of forms according
to the teachings of the present invention including but
35 not limited to the type utilizing a reciprocable,
rotatable tuning fork disclosed in U.S. Patent Nos.

1 5,205,106; 5,284,667; 5,455,053 and 5,723,163.

According to the teachings of the present invention, rather than providing a labeler and a label smasher as in U.S. Patent Nos. 5,205,106; 5,284,667; 5,455,053 and 5,723,163, one or more spray nozzles 142 are provided vertically above and spaced from conveyor 140 and spaced in a manner to not physically contact the strips of food 14 and support material 16 on conveyor 140 and upstream of roll-up section 76. According to the teachings of the present invention, nozzles 142 spray a source of moisture in the preferred form of a liquid consisting of food grade water. In the preferred form, the water is free of adhesive type additives such as corn syrup and in the most preferred form is free of all additives.

15 In a preferred form, a fewer number of nozzles 142 are provided than the number of strips of food 14 and support material 16, with each nozzle 142 spraying a source of moisture over more than one strip of food 14 and support material 16. In this regard, four nozzles 142 could be provided to spray ten strips of food 14 and support material 16. In other forms, a separate nozzle 142 can be associated and transversely aligned with each strip of food 14 and support material 16. In such preferred forms, each nozzle 142 can have a spray pattern having a transverse width less than the width of the strip of support material 16, preferably less than the width of the strip of food 14, and most preferably approximately two thirds the width of the strip of food 14.

According to the teachings of the present invention, operation of each nozzle 142 is not continuous, but rather nozzles 142 spray a deposit 144 adjacent to trailing end 138 of the strips of food 14 and support material 16 and in the most preferred form with deposit 144 having a trailing end coextensive with the trailing end 138 of the strips of food 14 and support material 16, with deposit 144 extending upstream from trailing end 138. Deposit 144 which defines a first portion has a relatively short

1 length considerably shorter than the remaining, second
portion of the strips of food 14 and support material 16
and than the total elongated length of the strips of food
14 and support material 16, with deposit 144 in the most
5 preferred form being generally 10% of the elongated length
of the strips of food 14 and support material 16. In the
preferred form shown, deposit 144 has side edges spaced
inwardly from and parallel to the side edges of food 14.
According to the teachings of the present invention, the
10 remaining second portions of the strips of food 14 and
support material 16 (other than deposit 144) are free of
spray liquid. In this regard and in the most preferred
form, air is blown through nozzles 142 after supply of the
spray liquid has been terminated to nozzles 142 to remove
15 any droplets of spray liquid that have remained in the tip
of nozzles 142 to insure that such droplets fall in deposit
144 and not after leading edge 136 of the next strip of food
14 and support material 16.

Food 14 as processed during fabrication has a moisture
20 content which enhances its shelf life, and particularly has
a moisture content which does not result in food 14
undesirably degrading during normal storage times before
consumption. With this moisture content, food 14 has a
tackiness which may adhere to support material 16 when
25 rolled into a roll but typically which is insufficient to
prevent unintentional unrolling during further fabrication
processes such as wrapping and other packaging operations.
However, food 14 within deposit 144 has an increased
moisture content so that food 14 becomes sticky or in
30 other words has an increased tackiness sufficient to
adhere to support material 16 in the roll to prevent
unintentional unrolling of the roll at least temporarily
during further fabrication processes. In the most
preferred form, food 14 is fabricated in a continual
35 process and has a constant consistency (aside from
moisture content) between the leading and trailing ends
136 and 138. In this regard, food 14 itself adheres to

1 support material 16 and specifically food 14 does not
include an additive or adhesive which secures food 14 to
support material 16.

25 The strips of food 14 and support material 16
5 including deposit 144 can be rolled in roll-up section 76
in the conventional manner so that support material 16 is
located on the outside of the roll, trailing edge 138 is
located on the periphery of the roll, and leading edge 136
is located adjacent the center of the roll and in the most
10 preferred form, with the strip of support material 16 and
food 14 being rolled around leading end 136 which is cut
and into a roll having multiple rotations. According to
the teachings of the present invention, deposit 144 will
cause food 14 adjacent to trailing end 138 to adhere to
15 support material 16 on the underlying wind of rolled food
item 110 and specifically without requiring the use of a
label. It should be appreciated that roll-up section 76
can include a pressure plate such as of the type disclosed
in U.S. Patent Nos. 5,205,106; 5,284,667; 5,455,053 and
20 5,723,163 to place pressure upon and to adhere food 14 of
increased tackiness within deposit 144 to support material
16 to thus secure the strip of food 14 and support
material 16 in a rolled or coiled condition during later
fabrication steps such as in wrapping and other packaging
25 operations.

30 The spray liquid should be applied by nozzles 142 in
deposits 144 in an amount so that food 14 develops
sufficient tackiness to be adherable to the strip of support
material 16. Specifically, the adhesion of food 14 on
30 support material 16 depends on the viscoelastic and the
surface tension properties of food 14. Support material 16
is silicone coated in the most preferred form to achieve
just enough cohesive bond between food 14 and support
material 16, such that the former remains attached to the
35 later during processing and storage. However, food 14 peels
easily off support material 16 for consumption. Studies
with adhesive strength of synthetic films showed that the

09150692-091098

1 higher the wettability of the film, the greater the adhesive
strength between the product and the film. The normal water
activity of food 14 does not allow support material 16
(whose wettability has been reduced by silicone coating in
5 the preferred form) to adhere to trailing edge 138 of food
14 during the formation of rolled food item 110. According
to the teachings of the present invention, the water
activity of food 14 within deposit 144 at trailing edge 138
was increased by the application of the spray liquid just
10 before rolling in roll-up section 76. Because of the
viscoelastic nature of food 14, the pressure applied in
roll-up section 76 to trailing edge 138 of rolled food item
110 helps in the adhesion of deposit 144 of food 14 to the
body of the roll. It was observed that too much moisture in
15 food 14 also decreases the adhesion characteristics of food
14.

In this regard, a method was devised to measure the
adhesion strength of the formed rolled food item 110. A
texture analyzer, Model XT2, made by Stable Micro Systems,
20 England was used for this purpose. The sample holder
consisted of an aluminum rod hinged between two clamps,
which in turn were attached to a wooden base. The whole
assembly was attached to the texture analyzer in such a way
that the rod is positioned horizontally, crossways to the
25 operator, directly beneath the probe of the texture
analyzer. A sample rolled food item 110 was collected as
soon as rolled food item 110 was formed in roll-up section
76. A 1.2 cm by 1.2 cm VELCRO sticky back square was gently
taped to rolled food item 110 in such a way that trailing
30 edge 138 of support material 16 aligns with an edge of the
square. Rolled food item 110 was slipped into the aluminum
rod and was placed in contact with the probe of texture
analyzer already equipped with a complementary VELCRO sticky
back square. The rod was then secured between the clamps,
35 and the tensile strength required to peel trailing edge 138

For proper adhesion of trailing edge 138 of the strip of support material 16 and food 14 to the roll body, a minimum adhesive strength of 42 grams-force/cm², measured through the peel off test as described above, was required. An adhesive strength of 100 to 300 grams-force/cm² was found to be optimum. A water activity above 0.59 in deposit 144 gives proper adhesion of rolled food item 110. However, a water activity above 0.64 results in less tacky products. The optimal range therefore, is 0.59-0.64 water activity for food 14 after the application of the spray liquid.

It should be appreciated that after fabrication has been completed, the spray liquid within deposit 144 over time may decrease such as the result of evaporation or dispersion throughout the remaining portions of food 14 to be of an amount to reduce its tackiness, even to an amount which is insufficient to adhere food 14 to the strip of support material 16. However, the forces which would tend to unintentionally unroll rolled food item 110 is considerably less after fabrication. In fact after fabrication, reduction of tackiness may desirably increase the ease at which rolled food item 110 can be initially, intentionally unrolled by the consumer. Additionally, the evaporation and/or dispersion of the spray liquid from deposit 144 is also advantageous in the reduction of the possibility of the degradation of food 14 in deposit 144 as the result of the increased moisture content including but not limited to molding. In this regard, it should be appreciated that if nozzles 142 were operated continuously or in a manner to spray substantial portions of the strip of food 14 and support material 16 in an amount to develop adhering tackiness, the shelf life of the resulting rolled food item could be significantly reduced to an extent which would make it unmarketable.

1 Rolled food item 110 according to the teachings of the
present invention is advantageous over prior rolled food
items. In particular, the strip of food 14 and support
material 16 is contacted only by a spray and in particular
5 is not mechanically contacted such as required during the
application of labels. Further, in the most preferred
form, only water is added and particularly no other food
ingredient such as corn syrup is added which could affect
the consistency, taste or appearance of food 14.
10 Additionally, problems in the handling of corn syrup or
like food additives including clogging additive passages
and stickiness when contacting other surfaces and
apparatus components including the cleaning thereof is
avoided when water is utilized. In fact, existing
15 fabrication equipment can be easily modified by the simple
replacement of the labeler and associate label applying
accessories or other fabrication unrolling prevention
provisions with nozzles 142. In the preferred form with
only water being sprayed, clogging and cleaning
20 requirements of nozzles 142 are minimized in comparison to
the problems associated with moving and cleaning corn
syrup or similar food adhesives. Additionally, the
fabrication and inventory costs for labels as well as the
capital costs associated with the fabrication and
25 application of such labels are avoided. Thus, existing
fabrication equipment and its operating conditions can be
utilized without significant change and in many cases with
more trouble free operation.

Now that the basic teachings of the present invention
30 have been explained, many extensions and variations will
be obvious to one having ordinary skill in the art. For
example, although the operation of spray nozzles 142 is
shown while the strip of food 14 and support material 16
is being rolled adjacent to its leading end 136, deposit
35 144 can be provided at any position upstream of roll-up
section 76 including while the strip of food 14 and
support material 16 is generally in a planar condition

69150602 041098

1 according to the teachings of the present invention.
Similarly, although the operation of spray nozzles 142
is shown while the strip of food 14 and support material
16 is of its marketable length, deposit 144 can be sprayed
5 on food 14 and support material 16 prior to cutting into
multiple strips and/or cutting to length according to the
teachings of the present invention when food 14 is
continuously applied to continuous roll stock of support
material 16.

10 Thus since the invention disclosed herein may be
embodied in other specific forms without departing from
the spirit or general characteristics thereof, some of
which forms have been indicated, the embodiments
described herein are to be considered in all respects
15 illustrative and not restrictive. The scope of the
invention is to be indicated by the appended claims,
rather than by the foregoing description, and all changes
which come within the meaning and range of equivalency of
the claims are intended to be embraced therein.

09150692 0918098

CLAIMS

1. Method for fabricating a rolled food item, comprising the steps of: providing a strip of support material and food, with the strip of support material and food having a trailing edge and a leading edge, with the food having a tackiness; rolling the strip of support material and food into a roll having a periphery and a center, with the support material located on the outside of the roll, with the trailing edge located on the periphery of the roll and with the leading edge located adjacent the center of the roll; and spraying a deposit of a source of moisture at least on the food adjacent to the trailing edge prior to its rolling into the roll, with the source of moisture increasing the tackiness of the food sufficient to be adherable to the support material in the roll to at least temporarily prevent unintentional unrolling of the roll.

2. The method of claim 1 wherein the strip providing step comprises the step of providing the strip of support material and food having an elongated length between the trailing and leading edges; and wherein the spraying step comprises the step of spraying the deposit of a length considerably shorter than the elongated length of the strip of support material and food.

3. The method of claim 2 wherein the spraying step comprises the step of spraying the deposit with the length approximately 10% of the elongated length of the strip of support material and food.

4. The method of claim 2 wherein the spraying step comprises the step of spraying the deposit with a food grade water free of adhesive type additives.

5. The method of claim 3 wherein the strip providing step comprises the steps of providing a strip of support material having side edges and providing food having side edges spaced inwardly from the side edges of the strip of support material.

09150692, 0910093

6. The method of claim 5 wherein the spraying step comprises the step of spraying the deposit having side edges spaced inwardly from the side edges of the food.

7. The method of claim 6 wherein the step of providing food comprises the step of providing a strip of food with the leading and trailing edges of the strip of food being coextensive with the leading and trailing edges of the strip of support material.

8. The method of claim 7 wherein the spraying step comprises the step of spraying the deposit having a trailing edge coextensive with the trailing edge of the strip of food.

9. The method of claim 8 wherein the strip providing step comprises the step providing food in the form of a sweetened dehydrated fruit based material.

10. The method of claim 9 wherein the strip providing step comprises the step of providing the strip of support material in the form of silicon parchment paper.

11. Apparatus for fabricating a rolled food item, comprising, in combination: means for providing a strip of support material and food, with the strip of support material and food having a trailing edge and a leading edge, with the food having a tackiness; means for rolling the strip of support material and food into a roll having a periphery and a center, with the support material located on the outside of the roll, with the trailing edge located on the periphery of the roll and with the leading edge located adjacent the center of the roll; means for spraying a deposit of a source of moisture at least on the food adjacent to the trailing edge prior to its rolling into the roll, with the source of moisture increasing the tackiness of the food sufficient to be adherable to the support material in the roll to at least temporarily prevent unintentional unrolling of the roll.

12. The apparatus of claim 11 wherein the strip of support material and food has an elongated length between

09150652.091099

the trailing and leading edges; and wherein the deposit has a length considerably shorter than the elongated length of the strip of support material and food.

13. The apparatus of claim 12 wherein the strip of support material and food comprises the strip of support material having side edges and a strip of food having side edges spaced inwardly of the side edges of the strip of support material, with the leading and trailing edges of the strip of food being coextensive with the leading and trailing edges of the strip of support material, with the deposit having side edges spaced inwardly from the side edges of the strip of food and having a trailing edge coextensive with the trailing edge of the strip of food.

14. Rolled food item comprising, in combination: a strip of support material and food, with the strip of support material and food having a trailing edge and a leading edge, with the strip of support material and food being rolled in a roll having a periphery and a center, with the support material located on the outside of the roll, with the trailing edge located on the periphery of the roll, with the leading edge located adjacent the center of the roll, with the food having a first portion adjacent the trailing edge and a second portion of a substantially longer length than the first portion, with the first portion of the food having a moisture content greater than the moisture content of the second portion and so that the tackiness of the food is sufficient to adhere to the support material in the roll to at least temporarily prevent unintentional unrolling of the roll.

15. The rolled food item of claim 14 wherein the first portion has a length approximately 10% of the length of the strip of support material and food between the trailing and leading edges.

16. The rolled food item of claim 15 wherein the food has side edges spaced inwardly from the side edges of the strip of support material and with the first portion

having side edges spaced inwardly from the side edges of the food.

17. The rolled food item of claim 16 wherein the food comprises a strip of food having leading and trailing edges coextensive with the leading and trailing edges of the strip of the support material, with the first portion having a trailing edge coextensive with the trailing edge of the strip of food.

18. The rolled food item of claim 17 wherein the food is in the form of a sweetened dehydrated fruit based material.

19. The rolled food item of claim 18 wherein the support material is in the form of silicon parchment paper.

20. The rolled food item of claim 17 wherein the strip of food has the same consistency between the trailing and leading edges aside from increased moisture content in the first portion.

045003-0400

1 TITLE

Labelless, Rolled Food Item And Its Fabrication

ABSTRACT OF THE DISCLOSURE

5 A rolled food item (110) is fabricated by rolling a strip of support material (16) and food (14) about its leading end (136) into a roll. Prior to its rolling into the roll, a deposit (144) of water is sprayed onto the food (14) adjacent to the trailing end (138) to increase the tackiness of the food (14) sufficient to be adherable
10 to the support material (16) in the roll to at least temporarily prevent unintentional unrolling of the roll during later fabrication operations. In the preferred form, the trailing end of the deposit (144) is coextensive with the trailing end (138) of the strip of support
15 material (16) and food (14). In one form, the side edges of the deposit (144) are spaced inwardly from the side edges of the food (14) which are spaced inwardly from the side edges of the support material (16).

09150693 091003

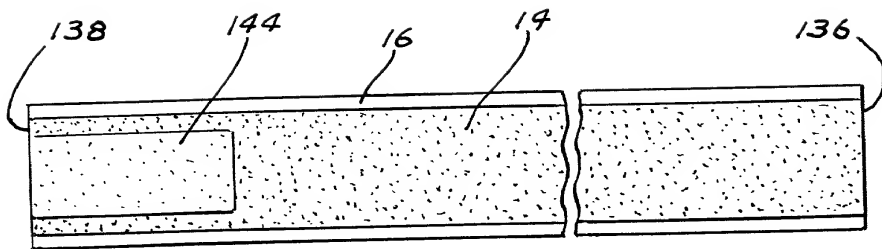


FIG. 1

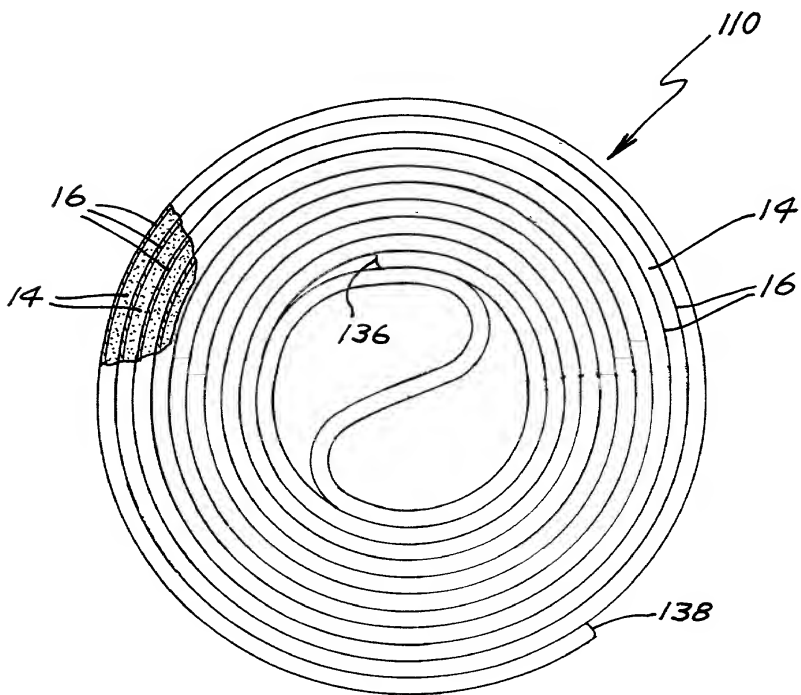


FIG. 2

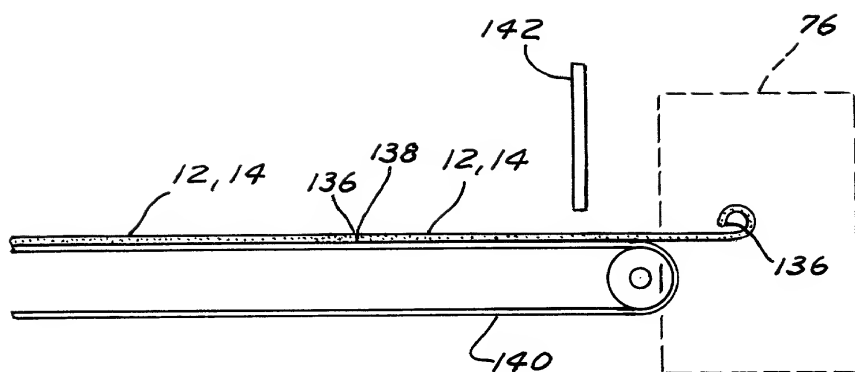


FIG. 3a

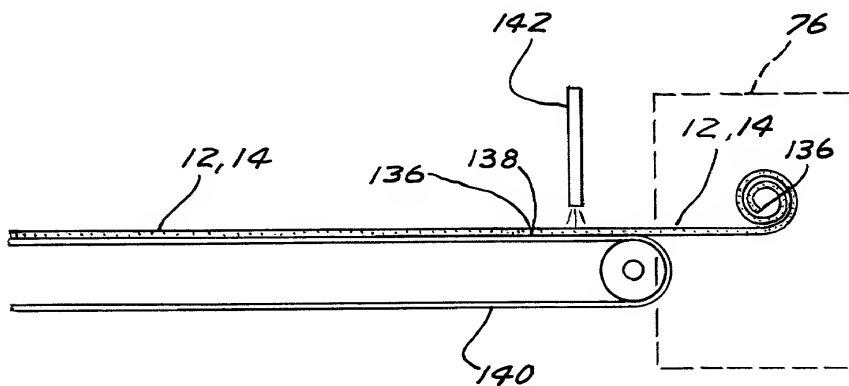


FIG. 3b

DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are list below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

LABELLESS, ROLLED FOOD ITEM AND ITS FABRICATION

the specification of which

(X) is attached hereto.

() was filed on _____ as

Application Serial No. _____

and was amended on _____.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claim(s), as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Sec. 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, Sec. 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed: None

Prior Foreign Application(s)

Priority Claimed

(Number) (Country) (Day/Month/Year Filed)

()Yes ()No

(Number) (Country) (Day/Month/Year Filed)

()Yes ()No

(Number) (Country) (Day/Month/Year Filed)

()Yes ()No

I hereby claim the benefit under Title 35, United States Code, Sec. 120 of any United States application(s) listed below and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Sec. 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Sec. 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application: None

09150692-091095

(Application Serial No.) (Filing Date) (Status: patented, pending, or abandoned)

(Application Serial No.) (Filing Date) (Status: patented, pending, or abandoned)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John A. O'Toole (Reg. No. 28,336)
Taylor, Douglas J. (Reg. No. 32,945)
Alan D. Kamrath (Reg. No. 28,227)

Send correspondence to:

John A. O'Toole, Esq. P.O. Box 1113, Minneapolis, Minnesota 55440, Phone: 612-540-2422

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Gary S. Bachand

Inventor's Signature _____

Date

Residence: 2340 Winchester Drive, Marion, Iowa 52302

Citizenship: United States

Post Office Address: Same as residence

Full name of second joint inventor, if any Soumya Roy

Second Inventor's Signature _____

Date

Residence: 4910 Olive Lane North, Plymouth, Minnesota 55446

Citizenship: India

Post Office Address: Same as residence

Full name of third joint inventor, if any Jeffrey A. Taylor

Third Inventor's Signature _____

Date

Residence: 18869 Wynnfield Road, Eden Prairie, Minnesota 55347

Citizenship: United States

Post Office Address: Same as residence

09150692:091099

Full name of fourth joint inventor, if any Craig E. Zimmermann

Fourth Inventor's Signature _____ Date _____

Residence: 140 East Lake Street, Waconia, Minnesota 55387

Citizenship: United States

Post Office Address: Same as residence

Full name of fifth joint inventor, if any _____

Fifth Inventor's Signature _____ Date _____

Residence:

Citizenship:

Post Office Address: Same as residence

Full name of sixth joint inventor, if any _____

Sixth Inventor's Signature _____ Date _____

Residence:

Citizenship:

Post Office Address: Same as residence

Full name of seventh joint inventor, if any _____

Seventh Inventor's Signature _____ Date _____

Residence:

Citizenship:

Post Office Address: Same as residence

00150602-091000

United States Patent & Trademark Office

Office of Initial Patent Examination -- Scanning Division



Application deficiencies found during scanning:

1. Application papers are not suitable for scanning and are not in compliance with 37 CFR 1.52 because:
 - ☐ All sheets must be the same size and either A4 (21 cm x 29.7 cm) or 8-1/2" x 11". Pages _____ do not meet these requirements.
 - ☐ Papers are not flexible, strong, smooth, non-shiny, durable, and white.
 - ☐ Papers are not typewritten or mechanically printed in permanent ink on one side.
 - ☐ Papers contain improper margins. Each sheet must have a left margin of at least 2.5 cm (1") and top, bottom and right margins of at least 2.0 cm (3/4").
 - ☐ Papers contain hand lettering.
2. Drawings are not in compliance and were not scanned because:
 - ☐ The drawings or copy of drawings are not suitable for electronic reproduction.
 - ☐ All drawings sheets are not the same size. Pages must be either A4 (21 cm x 29.7 cm) or 8-1/2" x 11".
 - ☐ Each sheet must include a top and left margin of at least 2.5 cm (1"), a right margin of at least 1.5 cm (9/16") and a bottom margin of at least 1.0 cm (3/8").
3. Page(s) _____ are not of sufficient clarity, contrast and quality for electronic reproduction.
4. Page(s) _____ are missing.
5. OTHER: NO Transmittal

09150692 091093